

## **REMARKS/ARGUMENTS**

### **Claim Amendments**

The Applicant has amended claims **1, 2, 4, 6-9 and 11**. Support for the claim amendments is found in paragraphs 29-42. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-12 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### **Claim Rejections – 35 U.S.C. § 103 (a)**

Claims 1-3 and 5-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Onoe et al (US Patent Number 5,361,396) in view of Ernam, et al. (US Patent Number 6,148,201) in further view of Boudreau et al (5,369,681). The Applicant respectfully traverses the rejection of these claims.

The Applicant has amended claim 1 to clarify the language and to distinguish the Applicant's present invention from the Prior. Though not necessary to claim the present invention, the Applicant has added the limitation of the HLR (see Figure 1) to claim 1 to more clearly distinguish Applicant's RCDB from an HLR disclosed in the prior art. Additional amendments have been made to improve the readability of the claim.

In the Applicant's invention, when a mobile station leaves a particular cell, the MSC that originally registered the mobile station will page the original registration chain (original Location Area and cell) first. Then, if the mobile station does not respond, the MSC pages the whole global paging area to which the location area belongs. Then another global paging area is paged followed by the entire service area. (Paragraph 34).

As defined in the Applicant's present invention, a "global paging area" in the MSC pool is essentially a subset of the network service area and is defined in the RCDB. Global paging area is different from a "global page," which is a page sent to all cells in a particular area, typically an entire service area. In the present invention, the network is divided into global paging areas and the information (including BSC, location area and cells) regarding the areas is entered into the RCDB. A history of the mobile station locations in the RCDB is maintained to be able to dynamically change the global paging

area of the mobile station if there is no response from the mobile station. The MSC pool is different from having multiple MSCs in a network as disclosed in the Onoe reference. In contrast to Onoe, each of the MSC's in the MSC pool in the Applicant's invention can communicate with all the Base station controllers in the network; essentially, in the pool the MSC's act as one MSC (para. 30).

The Onoe reference, among other reasons, is cited for disclosing a Home Memory Station, essentially an HLR, that reads on the "radio configuration database". Onoe's Home Memory Station stores location codes so that a mobile station can be located. Onoe describes the Home Memory Station as, "...storing location code of each mobile station showing which location registration area each mobile station is currently registered in. (Summary lines 8-11). Also, the Home Memory Station updates the location code or the location identifier of the mobile station in its memory (Col. 2, lines 28-30). So, the Home Memory Station keeps track of the mobile station location.

The radio configuration database (RCDB) of the Applicant's invention defines a plurality of global paging areas within a specified service area (Paragraph 31). A page to a mobile station thought to be in a particular area starts at the location area and if there is no response, the page moves to the RCDB defined global paging area in which the location area is located. If there is no response to the page in the global paging area the page is made at another of the defined global paging areas in the RCDB. Only after paging in one or more global paging areas and receiving no response does the page go to the entire service area. (Paragraph 42)

The Applicant respectfully submits that the Home Memory Station of Onoe tracks the location of the mobile station but does not define the global paging areas and does not read on the Applicant's radio configuration database.

The Ernam reference is cited for disclosing a MSC able to communicate with a pool of BSC's via a mediator. As noted in previous arguments, the Applicant's invention does not use a mediator and each MSC in the MSC pool can communicate with each of the BSC's in the global areas. Neither does Ernam supply the Applicant's limitation of a MSC pool with all the MSCs capable of communicating with all of the base stations without need for a mediator in each of the global paging areas.

The Boudreaux reference is cited for reading on global paging and for dynamically changing global paging areas by maintaining a history of movement of a mobile station. The paging process in Boudreaux first sends a page to the last known location of the desired mobile station. If there is no response, page requests are sent to a group of predetermined location areas which includes the first location area and location areas that statistically would be likely to contain the mobile station. If still unsuccessful, a page is sent to the entire service area. (Figure 2)

Boudreau's use of location area for paging is similar to the Applicant's invention. The Applicant's invention sends a page to the last known location area as in Boudreau. In Boudreau the next page is to the Paging Area that consists of location areas around the last known location area. (The Paging Area might be considered similar to the Applicant's global paging area.) However, the next page in Boudreau is sent to the entire service area.

The difference in the Applicant's invention is that there is at least one more page, to another global paging area within the service area, before going to the entire service area. Only after trying more than one global paging area is the page broadcast to the entire service area. (paragraph 42).

Therefore, the Applicant respectfully requests the withdrawal of the rejection of claim 1 and since claims 3 and 5-6 depend from amended claim 1 and recite further limitation in combination with the novel elements of claim 1, the withdrawal of the rejection of the depending claims is also requested.

Claims 4 and 7-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Onoe et al (US Patent Number 5,361,396) in view of Ernam, et al. (US Patent Number 6,148,201) in further view of Boudreau et al (5,396,681), in further view of Kim et al (US Patent Number 6,343,216). The Applicant respectfully traverses the rejection of these claims. The Applicant also respectfully submits that the references used to reject claims 4 and 7-10 appear to lack a teaching, suggestion or incentive to combine all the references. Even so, the Applicant respectfully asserts that a combination of the references would not form the presently claimed invention.

The Onoe, Ernam, Boudreau references are noted as failing to teach a means for attempting a page in the global paging area to which the mobile station was last connected. The Kim reference is cited as reading on the Applicant's claimed "global paging". However, Kim's definition of a global page is different from the Applicant's definition of global paging area as noted above.

The difference between the present invention and Kim is that Kim's MSC can page a "broad" area, but the page is sent to the cells assigned to the paging MSC (Col 6, lines 56-58). In other words, the MSC pages only the cells covered by the MSC. There is no indication that the MSC can page into other defined paging areas as described in the Applicant's invention. (Paragraph 42) Neither does the Kim reference supply the missing element of any of the MSC's in the MSC pool communicating with the BSCs and maintaining a history of the mobile station locations so as to dynamically change the global paging area of the mobile station.

Also, the Kim reference lacks the limitations that are also lacking in the other prior art references; those of a radio configuration database, an MSC pool wherein the MSC's in the pool can communicate/page with all the BSC's associated with the pool, and paging a mobile station in at least one more global paging area prior to paging the entire service area covered by the MSC pool. This being the case, the Applicant respectfully requests the withdrawal of the rejection of claims 4 and 7. The dependent claims 8-10 contain the same subject matter as that claimed in independent claim 7 and the withdrawal of the rejection of claims 8-10 is also respectfully requested.

Claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Onoe et al (US Patent Number 5,361,396) in view of Ernam, et al. (US Patent Number 6,148,201) in further view of Boudreau et al (5,396,681), in further view of Hanson (US Patent Number 6,035,203). The Applicant respectfully traverses the rejection of these claims.

The Hanson reference is cited for teaching a processing and database node that maintains a record of the most recent location that reads on claimed "last known location" of the mobile station. However, Hanson does not include the novel elements

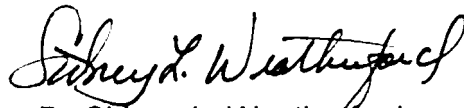
set forth in amended independent claim 7. Claims 11 and 12 depend from amended claim 7 and recite further limitations in combination with the novel elements of claim 7. Therefore, the withdrawal of the rejection of claims 11-12 is respectfully requested.

### CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sidney L. Weatherford", is written over the typed name.

By Sidney L. Weatherford  
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